



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Serial No.09/643,004
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 Inventor.....Garry A. Mercaldi
 Assignee.....Micron Technology, Inc.
 Group Art Unit.....2823
 ExaminerJ. Maldonado
 Attorney's Docket No.MI22-1358
 Customer No.021567
 Title: Low Selectivity Deposition Methods

37 C.F.R. § 1.144 PETITION FROM REQUIREMENT FOR RESTRICTION

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REMARKS

Applicant respectfully requests review by the Director of the species restriction requirement in the December 16, 2003 Office Action, which was timely traversed by the Applicant and subsequently made final by the Office. Pursuant to 37 CFR §§ 1.181(d) and 1.144, no fee is believed due, however, this Petition is accompanied by a deposit account fee authorization.

Claims 9-41 and 47-69 are pending in the application. Claims 52, 53, 55-57, and 59 are withdrawn from consideration. Applicant elected the subject matter of the first species with traverse. The first species is defined on page 2 of the December 16, 2003 Office Action as "including non selectively forming a monolayer of a deposition layer via a nucleation layer on two surfaces even though the first and second surfaces of the

substrate exhibit a property of the deposition layer forming less readily on the first surface compared to the second surface.” The same Office Action defines the second species as “including forming a monolayers [sic] and a nucleation layer on a substrate in the same chamber.” The same Office Action defines the third species as “including forming a monolayers [sic] on a nucleation layer on a substrate on different chambers.”

Applicant traversed on the grounds that the species definitions are invalid as not possessing mutually exclusive characteristics pursuant to MPEP 806.04(f). As such, Applicant asserted that it was impossible to provide a listing of claims readable only upon one species since some of the claims read upon multiple species and requested withdrawal of the restriction requirement. Merely to provide a complete reply, and without admitting to the propriety of the restriction requirement, Applicant asserted that claim 9-41, 47-51, 54, and 58 were readable on the first species. After the Office’s refusal to withdraw the restriction requirement in the April 20, 2004 Office Action, Applicant replied and adequately established that all pending claims read upon the first species. However, the Office refused to consider claims 52, 53, 55-57, and 59.

Regarding validity of the species restriction, MPEP § 806.04(f) states that “claims to be restricted to different species must recite the mutually exclusive characteristics of such species.” (Emphasis added). That is, the existence of mutually exclusive characteristics among species is implicit in the concept of species restriction. It is clearly apparent that the first species is generic to the second and third species. Specifically, the first species includes within its confines the organization covered in both the second species and the third species. For example, a deposition process, according to the first species, on a substrate having two surfaces with different deposition characteristics may be performed in a single deposition chamber, in


accordance with the second species, or in two deposition chambers, in accordance with the third species. Understandably then, Applicant's election of the first species does not make possible the indication of claims readable only upon one species since at least some of the claims read upon the first species as well as upon the second and/or third species and vice versa. MPEP § 806.04(f) also states that "the general test as to when claims are restricted, respectively to different species is the fact that one claim recites limitations which under the disclosure are found in a first species but not in a second, while a second claim recites limitations disclosed only for the second species and not the first." Accordingly, the species definitions do not permit restriction of claims to different species, the species restriction is improper, and the restriction should be withdrawn.

Regarding which claims read upon the first species, Applicant notes that withdrawn claims 52 and 56 both encompass within their confines the organization covered by the first species. That is, even though claims 52 and 56 do not expressly set forth a deposition process on a substrate having two surfaces with different deposition characteristics, claims 52 and 56 do not exclude such a deposition process. In fact, claims 54 and 58 depending respectively from claims 52 and 56 further limit the independent claims and set forth a substrate having two surfaces with different deposition characteristics. Clearly then, claims 52 and 56 must encompass within their confines the organization covered by the first species. The Office also acknowledged that claims 54 and 58 read upon the first species. Since claims 52-59 read upon the first species, they are entitled to consideration.

Applicant asserts that the restriction requirement is improper and should be withdrawn. Applicant further asserts that claims 52-59 are entitled to consideration in the present application and requests examination to that effect in the next Office Action.

Respectfully submitted,

Dated: 06 Jul 2005

By: 
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